

*Harley Benton*

Electric Guitar Kit JA  
do it yourself kit



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## 1 Safety instructions



### **DANGER!**

#### **Danger for children**

Ensure that plastic bags, packaging, etc. are properly disposed of and are not in the reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the product. They could swallow the pieces and choke!

Never let children play unattended with the product.



### **CAUTION!**

#### **Risk of injury to the hands**

When assembling and screwing the individual parts, pay attention to sharp edges on tools, screws and components.



## 3 Assembly instructions

### Useful tools and materials

Provide the following tools and materials for the assembly of the guitar:

- Phillips screwdriver
- Rubber mallet
- Ring wrench
- Pliers / wire cutter
- Varnish and accessories
- Sandpaper



*Body and neck should by all means be painted before assembly.*

*When applying spray lacquer or paint, you must wear a dust mask.*

### 3.1 Cutting out headstock

Design the headstock with a suitable saw to your desired shape. Make sure there is sufficient clearance between the cutting edge and the peg holes for stability. As a reference here serve the retaining rings of the tuner mechanics.

Finally, deburr the cut edge with sandpaper or a suitable file.

## 3.2 Painting body and neck

### Painting the body

The solid wood of the guitar body is sealed and prepared for various types of lacquer coating. A wide variety of finishes can be procured from DIY, timber and automotive outlets in aerosol cans making finishing straightforward without requiring specialist skills.

The first step is to check the fit of the body to neck joint. These parts are machined from high-grade tone woods to ensure optimum alignment. However, wood is a natural material that changes its shape slightly over time. If the neck is too tight in the cutout on the body, you can rework the fit with a sharp chisel or sandpaper. Please keep in mind that the coating of lacquer will make the neck fit a little more tightly into the cutout.

Before coating the body, ensure that all surfaces are clean and free of dirt and dust. Carry out all painting operations in a well-ventilated, dust-free environment. Considered and careful working is a key factor for a qualitatively satisfactory result. It is highly recommended that you first try out the colour and technique on another piece of wood.

Paint the body edges first and let them dry. If the edges are dry, go on with front and back side. By layered, successive application you can achieve a uniform coating structure. If you notice surface irregularities, wait until the paint has dried completely and correct them with fine sandpaper (e.g. 800+) before proceeding to paint. For full coverage apply three or more layers.

Hang the painted body to dry in a dry, dust-free and preferably sunlight-protected area using a wire or hook in the recess for the guitar neck.

Wait another two to three days until the paint is fully cured. Polish or burnish the body until it meets your expectations. Take care not to buff too vigorously as this may remove the finish.

### Neck finish

The guitar neck is sealed with a thin layer of matt lacquer before delivery and is ready to use. If you still want to treat the neck with coloured or clear lacquer, proceed as follows.

Carefully mask off the fingerboard and all frets before painting. Make sure that all surfaces are free of dust and dirt. Carry out all painting operations in a well-ventilated, dust-free environment.

For the neck, use a clear or slightly tinted wood paint of good quality. Start on the front and at the edges of the headstock. Apply a thin layer evenly, let it dry and repeat the process two or three times. If you notice surface irregularities, wait until the paint has dried completely and correct them with fine sandpaper (e.g. 800+) before proceeding to paint.

Once the headstock has dried, place the neck on the fingerboard and paint the back of the neck as described.

Wait another two to three days until the paint is fully cured. Polish or burnish the neck until it meets your expectations. Take care not to buff too vigorously as this may remove the finish.

### 3.3 Mounting the machine head

Insert the four machine heads from the rear side of the headstock into the bores. Align the machine heads so that the tuning pegs are perpendicular to the top of the headstock.

Fix the machine heads as shown in the figure in this position hand-tight with the supplied screws.



Turn the neck over and fix all machine heads hand-tight with the supplied washers and nuts on the front of the headstock.



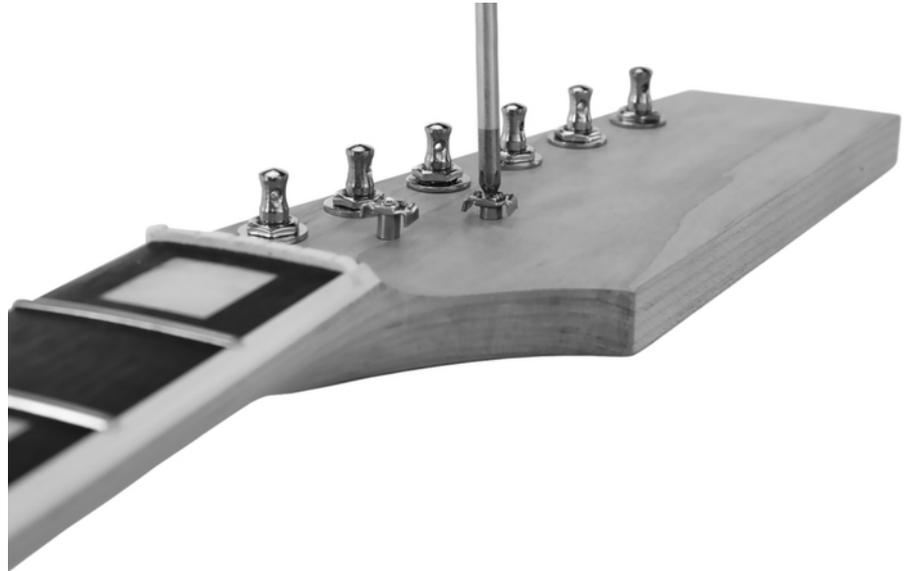
Tighten the nuts on the front with a suitable wrench, and then tighten the screws to secure the machine heads on the rear side.



### 3.4 Mounting the string retainer

Secure the two string retainers on the front of the headstock in the holes provided next to the machine heads. The string retainer with the larger spacer must be in the hole that is closer to the saddle.

Make sure that the string retainers can still move freely. These are only fixed by the tension of the strings.



### 3.5 Mounting the guitar neck

Place the body on a suitable work surface. Use a soft padding to prevent damages to the surface. Fit the neck into the neck cutout. If necessary, use a sharp chisel or sandpaper for reworking. Be very careful when removing material. The neck should be tight and never have too much clearance in the cutout!



Turn the guitar over, position the mounting plate over the four screw holes on the back of the body and screw the four supplied long wood screws through the holes in the mounting plate into the body and neck until the connection is firm.



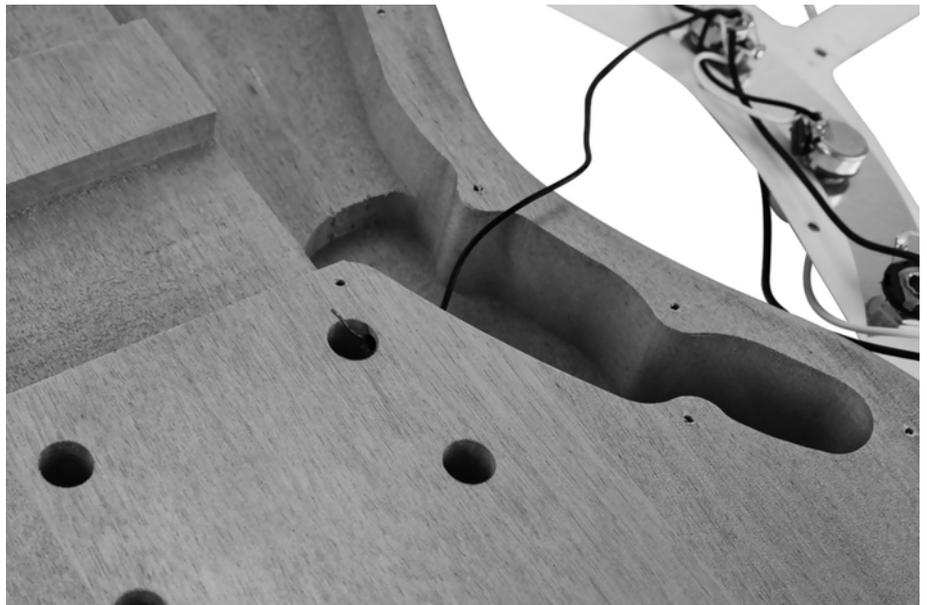
### 3.6 Mounting pickguard and pick-up

The pots, switches and output socket are already pre-assembled on the pickguard and only need to be connected to ground. Pickguard and pick-ups need to be bolted to the body.

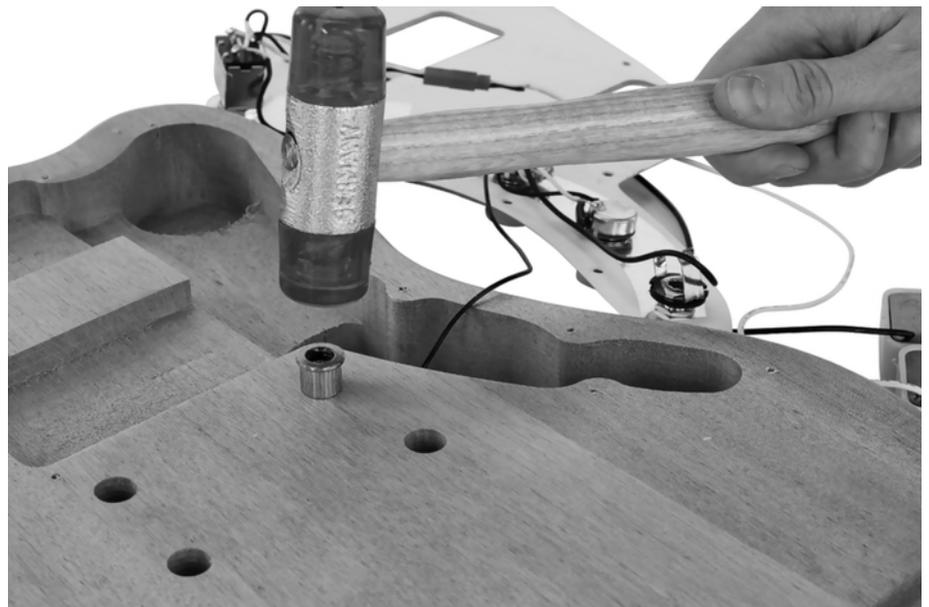
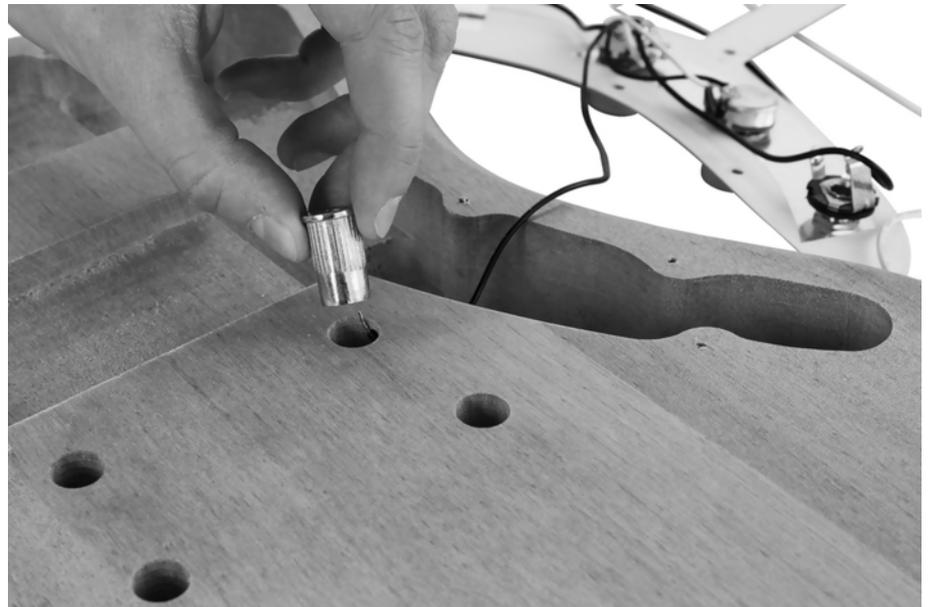
Thread the string-earthing cable (stripped, without connectors) through the channel from the back hole into the bridge mounting hole.



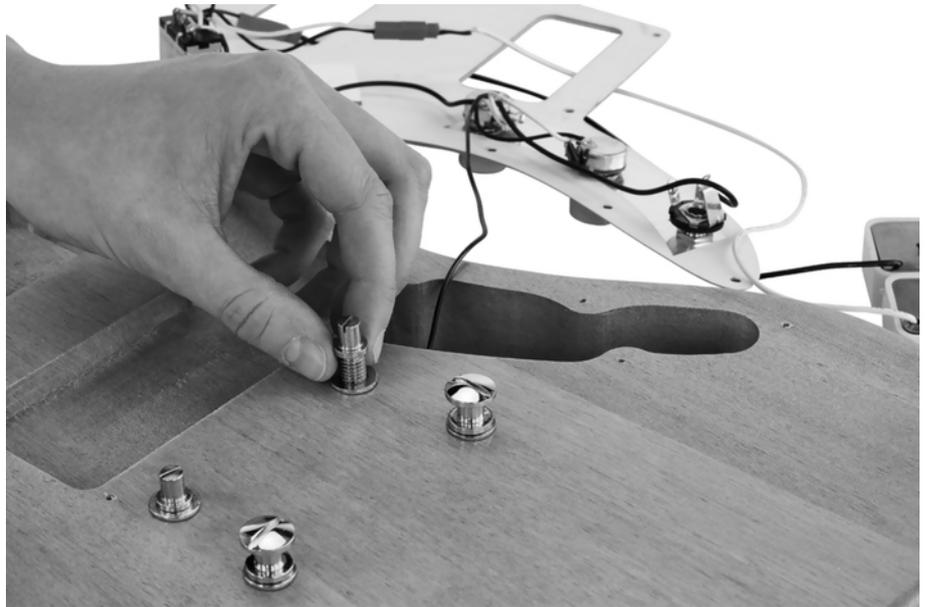
Lead the cable out of the hole so that sufficient contact with the metal surface can be achieved when fitting the bridge. String earthing reduces noise (buzzing).



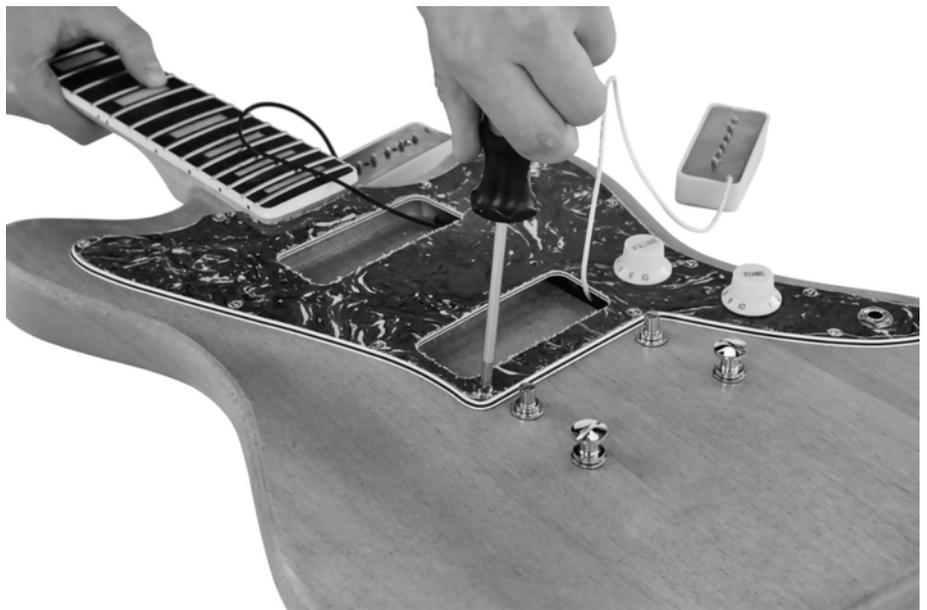
Using a rubber mallet, hammer the mounting bolts of bridge and tailpiece all the way into the body as shown. Make sure there is sufficient contact between the stripped end of the grounding cable and the bridge bolt.



Screw the bridge and tailpiece mounting bolts into the bracket.



Place the pickguard on the front of the body so that all the wiring is in the recess provided. Screw the pickguard to the body with the screws provided, as shown in the following figure.



Screw the provided screws into the holes of the two pick-ups.



Insert the supplied springs onto the screws of the pick-ups.



Insert the pick-ups into the recesses and screw the pick-ups to the body. Make sure that the wiring of the pick-ups is placed so far under the pickguard and pads so that they are neither obstructing when screwing the pick-ups nor visible.



### 3.7 Mounting bridge and tailpiece

Place the body on a suitable work surface. Use a soft padding to prevent damages to the surface.

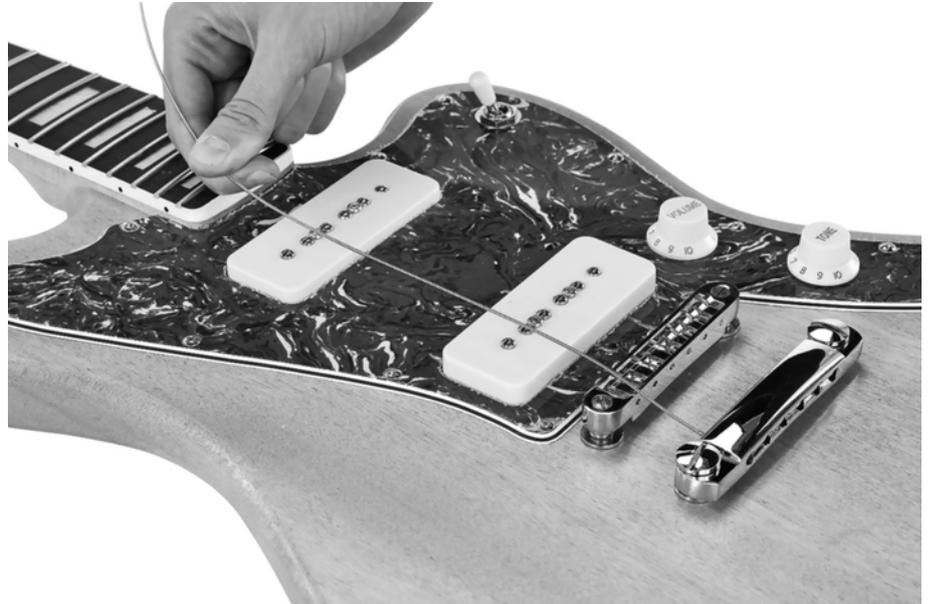
Put the bridge and the tailpiece onto the mounting bolts. Both components are still loose and are only fixed when stringing the guitar.

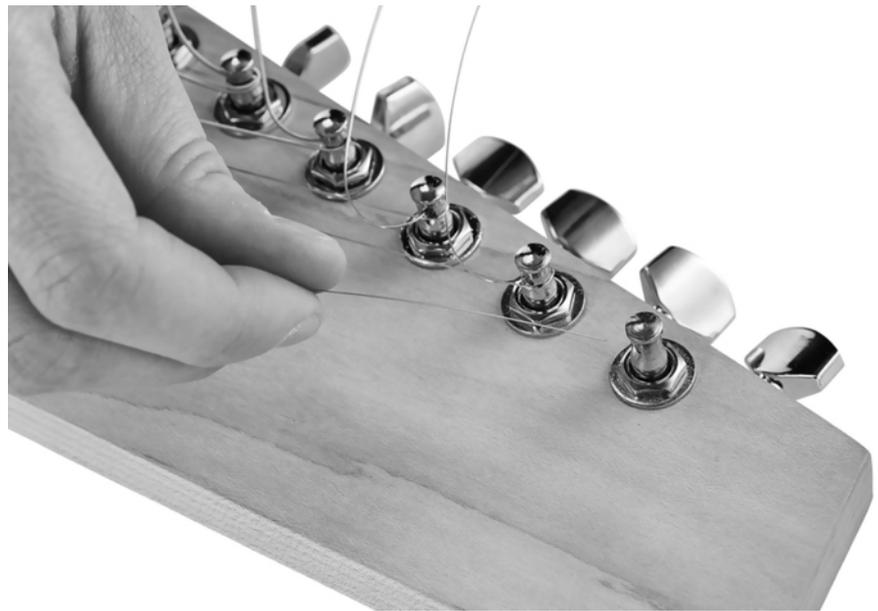


### 3.8 Strings, neck relief, string action and pick-ups

#### Stringing

The strings are threaded on the tailpiece and led over the bridge and the string saddle. Thread the strings into the holes of the machine heads, wrap the end of the string a few times around the peg, and then hand-tighten each string. Make sure that the individual strings are in the correct saddle position as well as in the corresponding string retainer.





Then tune all the strings in sequence to the correct pitch. You can use a tuner or a pitch pipe as a reference. Note that the string tension will drop a little and the guitar needs to be retuned several times until the strings stay in tune.

Shorten the protruding ends of the strings with a wire cutter.



### Adjusting neck relief

The neck is equipped with a steel truss rod, with which the neck relief can be adjusted individually to the playing habits.

After tuning the strings, check the neck relief by pressing the low E string on the first and twelfth fret. The closer the string is to the fingerboard at the sixth fret, the more noise (buzzing) will be heard when playing the guitar.

Adjust the neck relief with a suitable Allen key as follows:

- Turn the truss rod clockwise to increase the tension. The neck becomes straighter, in extreme cases convex. The string is closer to the fingerboard, easier to grip but causes more background noise when playing.
- Turn the truss rod counter-clockwise to decrease the tension. The neck yields more to the string tension and accordingly curves concave. The string moves away from the fingerboard, is a bit harder to grip, but causes less to no background noise when playing.

Adjust the truss rod by about a quarter turn per setting, tune all strings to the correct pitch after each adjustment, and check the neck relief again after some time. Repeat the process until the desired neck relief is achieved.



**Adjusting string action**

If the neck has the desired curvature, you can use the two screws on the right and left of the bridge and the screws of the individual string saddles to adjust the position of the strings according to your playing habits. Again, the lower the string action, the easier the strings are to grip, but cause slight background noise when playing the guitar.



After setting the string action, you can check the octave intonation of the guitar and readjust if necessary. Tune all strings to the correct pitch, touch the first string just above the twelfth fret, and hit it. The resulting overtone (harmonic in the 12th fret) must have the same pitch as the string in the 12th fret. If the pitch of the two notes is different, move the bridge piece forward for this string (tone too low) or back (tone too high). Listen to the pitch of the two notes and make incremental changes until the two notes match. Alternatively, you can also adjust the octave clarity with an instrument tuner. The pitch of the note in the 12th fret must be the same as the open string, but one octave higher.

### 3.9 Mounting the strap pins

Screw the strap pins into the pre-drilled holes in the body as shown.



## 4 Protecting the environment

### Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

### Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.







